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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,045	07/13/2005	Hendrik Wermter	PP/15-22821/A/CGM 520/PCT	8680

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EXAMINER	
WYROZEBSKI LEE, KATARZYNA I	
ART UNIT	**PAPER NUMBER**
1796	

MAIL DATE	DELIVERY MODE
05/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,045	WERMTER ET AL.	
	Examiner	Art Unit	
	Katarzyna Wyrozebski	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/19/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Use Claims

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 provides for the use of mixture, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Additionally, 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Thus, claim 20 is also rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

In order to overcome this rejection, it is advised that the applicant change the "use for" language in claim 20 to "process of using".

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8, 12, 13, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by KAUSH (US 6,414,070).

Examples 19-24 as summarized in Table I of KAUSH discloses following composition comprising:

Polyolefin matrix polymer

Grafting monomer – maleic anhydride grafted onto polypropylene

Organoclay – Cloisite 15A and 20A, which is ammonium treated montmorillonite clay produced by Southern Clay Products

Antioxidant – Irganox 1010, which is phenolic antioxidant produced by CIBA (see attached brochure). Amount of antioxidant is 0.6-0.7 pbw.

According to further claims of KAUSH, amount of organoclay in the composition is in a range of 2-20 pbw; additional smectite clays are listed in col. 4 of the prior art. Composition of KAUSH is flame retardant.

In the light of the above disclosure the prior art of KAUSH anticipates claims rejected above.

3. Claims 1-9, 12-20 are rejected under 35 U.S.C. 102(b) as being anticipated by LOOTJENS (WO 01/05880).

The prior art of LOOTJENS discloses composition comprising polyolefin and clay (Abstract).

The prior art of LOOTJENS discloses composition for molding and extrusion of various articles such as film, hoses and bottles (page 1).

In process of LOOTJENS a concentrate or masterbatch is formed, that comprises 98 wt % of polyolefin, 1-50 wt % of another polymer and 0.1-70 wt % of layered clay (page 2). According to page 7 the masterbatch is further mixed with polyolefin such that the final molding composition comprises 0.1-10 wt % of clay.

Clays are smectite clays such as montmorillonite, nontronite and the like. They are preferably pre-treated with cationic compound to render them organophilic (page3).

According to LOOTJENS (page 3), clay is also impregnated with polymerizable monomer, which are listed on page 4. Preferred polar monomer, is based on epoxy and include glycidyl acrylate. Additional monomers include carboxylic acids, esters and anhydrides.

Polyolefins utilized in LOOTJENS are further disclosed on page 5 of the prior art disclosure.

Additives include fillers, reinforcing agents (page 8), flame retardants, foaming agents, stabilizers, antiblocking agents, slipping agents, acid scavengers, antistatic agents and the like (page 9).

Example of LOOTJENS discloses use of Irganox B225, which is a mixture of Irganox 1010 and Irganox 168. Both formulas are disclosed in product information brochure published by CIBA. According to further examples, monomer (epoxy containing monomer) is utilized in amount of 1-7 wt % and Irganox is utilized in amount of 0.08-0.26 wt % (page 5).

The nanocomposite of LOOTJENS will by virtue provide to the article a stabilizing effect due to presence of Irganox antioxidant as well as other additives utilized therein.

In the light of the above disclosure, the prior art of LOOTJENS anticipates claims rejected above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over KAUSH (US 6,414,070) or LOOTJENS (WO 01/05880) in view of JP 05-271481.

The discussion of the disclosure of the prior art of KAUSH or LOOTJENS from paragraphs 2 and 3 of this office action is incorporated here by reference.

The difference between disclosure of KAUSH or LOOTJENS is recitation of polyfunctional epoxy compound.

With respect to the above difference JP prior art teaches polyolefin composition comprising inorganic filler which further comprises mixture of stabilizers and epoxy compound.

Specifically the antioxidants of JP disclosure are usually phenolic antioxidants (C), sulfur containing antioxidant (D), nitrogen containing antioxidant (E) and polyfunctional epoxy ether as compound F. The amounts of each component C-F are listed in paragraph [0035] with polyfunctional epoxy compound being 0.01-5 wt %. That amount is based on the epoxy equivalent.

Additives of JP disclosure further teach metal deactivators, various types of additional stabilizers and the like [0036].

The JP disclosure teaches that addition of the epoxy containing compound to polyolefin composition comprising phenolic antioxidants aids in improvement of thermal oxidation of the composition.

In the light of the above discussion it would have been obvious to one having ordinary skill in the art at the time of the instant invention, to utilize polyfunctional epoxy (especially in LOOTJENS) instead of mono-functional epoxy and thereby obtain the claimed invention. Such modification would still arrive at the teachings of LOOTJENS, since the monomeric additive as well as polymeric epoxy additive is added based on epoxy equivalent, therefore the result is expected to be the same.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 8:30 AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katarzyna Wyrozebski/
Primary Examiner, Art Unit 1796
May 7, 2008